

## CLAIMS

What is claimed is:

1. A complex between a *Shigella flexneri* polypeptide and a mammalian polypeptide as defined in columns 1 and 3 respectively of Table II.
2. A complex between a *Shigella flexneri* polynucleotide encoding a polypeptide as defined in column 1 of Table II, and a mammalian polynucleotide encoding a polypeptide as defined in column 3 of Table II.
3. A recombinant host cell expressing a polynucleotide encoding a *Shigella flexneri* polypeptide as defined in column 1 of Table II and a polynucleotide encoding a mammalian polypeptide as defined in column 3 of Table II.
4. The complex of claim 1 or claim 2 wherein said mammalian polypeptide is a human placenta polypeptide.
5. A method for selecting a modulating compound that inhibits or activates the protein-protein interactions between a *Shigella flexneri* polypeptide and a human placenta polypeptide in Table II comprising:
  - (a) cultivating a recombinant host cell on a selective medium containing a modulating compound and a reporter gene the expression of which is toxic for said recombinant host cell wherein said recombinant host cell is transformed with two vectors:
    - (i) wherein said first vector comprises a polynucleotide encoding a first hybrid polypeptide and a DNA bonding domain; and
    - (ii) wherein said second vector comprises a polynucleotide encoding a second hybrid polypeptide and an activating domain that activates said toxic reporter gene when the first and second hybrid polypeptides interact; and
  - (b) selecting said modulating compound which inhibits the growth of said recombinant host cell.
6. A modulating compound obtained from the method of Claim 5.
7. A SID® polypeptide comprising one of SEQ ID Nos. 216 to 416.
8. A SID® polynucleotide comprising one of SEQ ID Nos. 15 to 215.
9. A vector comprising the SID® polynucleotide of claim 8.
10. A fragment of the SID® polypeptide of Claim 7.
11. A variant of the SID® polypeptide of Claim 7.
12. A fragment of the SID® polynucleotide of Claim 8.
13. A variant of said SID® polynucleotide of Claim 8.
14. A vector comprising the fragment of the SID® polynucleotide of Claim 12.
15. A recombinant host cell containing the vector of claim 9.

16. A pharmaceutical composition comprising a modulating compound of Claim 6 and a pharmaceutically acceptable carrier.

17. A pharmaceutical composition comprising a SID® polypeptide of SEQ ID Nos. 216 to 416 and a pharmaceutically acceptable carrier.

18. A pharmaceutical composition comprising the recombinant host cell of Claim 15 and a pharmaceutically acceptable carrier.

19. A protein chip comprising a *Shigella flexneri* polypeptide of SEQ ID NOS. 1 to 7 or a mammalian polypeptide of Column 3, Table II.

20. A record comprising all or part of the data set forth in Tables I and II.

20110707 134444